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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,542

06/24/2005

Michael R. Bonner

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3001 WEST BIG BEAVER ROAD
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TROY, MI 48084

EXAMINER

FLANIGAN, ALLEN J

ART UNIT

PAPER NUMBER

3744

NOTIFICATION DATE

DELIVERY MODE

11/14/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/540,542	Applicant(s) BONNER ET AL.	
	Examiner Allen J. Flanigan	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-21 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 4 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

The restriction requirement made in the previous Office action has been withdrawn as the independent claims presented are essentially patentably indistinct in scope.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first and second fabric strips sewn to an inside of said cover at a plurality of locations, each of said strips defining a plurality of loops for receipt of a profile” of claim 22 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by

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the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no proper antecedent basis for “said end portions” in claim 21.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9-11, 18, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Horner.

Horner shows a conduit with a heating channel 4 that incorporates spreadable/moldable thermally conductive material 3 between and/or surrounding the pipe 1 and conduit 2 and is held in place by means such as “straps” or bands (lines 32-37 of column 5).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

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would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horner in view of Boyer.

It would have been obvious to one of ordinary skill in the art at the time the instant invention was made that some sort of fluid coupling would need to be provided for the channel 4 of Horner to deliver and remove fluid; illustration of such conventional features was presumably omitted as unnecessary. Boyer explicitly show such inlets and outlets provided extending perpendicular to the central conduit. Thus, it would have been obvious to one of ordinary skill in the art to provide such needed elements in the device of Horner, and to orient the openings of the couplings as desired for connection to a fluid source and sink. Regarding the "threaded" recitation of claim 17, the Examiner takes Official Notice of the notoriously well known nature of threaded couplings in fluid pipe connections.

Claims 2, 7, 8, 12, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horner, particularly in view of Collito.

Horner states in column 6 that "The invention is not limited to embodiments involving a single heating or cooling element", which clearly suggests the possibility of two or more channels disposed on a conduit. Collito expressly show that it is known in the art to provide plural abutting conduits to transfer heat to a central conduit. Thus, it would have been obvious to one of

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ordinary skill in the art to provide plural channels 4 in the invention shown in Horner to increase the heat exchange capacity of the device.

Claims 3, 5, 6, 19, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horner in view of Collito as applied to claim 2 above, and further in view of Kissell.

As noted above, Horner suggests that a wide variety of attachment means are suitable to secure the heating or cooling element and its housing to the conduit, including straps, clips, bands, wires, etc. Indeed, it is apparent that virtually any sort of well known attachment means would likely have been recognized as suitable for use in Horner; Kissell teach that it is known to apply an insulating layer to the outside of a conduit using a cover closed with hook and loop fastenings at the edges, wherein the cover may be fabric (see paragraphs 55, 75). Thus, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ such a known attachment means to attach one or more heating/cooling elements as shown in Horner to the outside of a conduit.

Regarding claim 23, note insulation 6 provided in Horner.

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horner in view of Collito as applied to claim 2 above, and further in view of Hauschulz et al.

As noted above, Horner suggests that a wide variety of attachment means are suitable to secure the heating or cooling element and its housing to the

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conduit, including straps, clips, bands, wires, etc. Indeed, it is apparent that virtually any sort of well known attachment means would likely have been recognized as suitable for use in Horner; Hauschulz et al. teach that it is known to employ flexible straps with hook and loop closures at the ends to secure the ends together to attach a flexible heater panel to the exterior of a pipe. Thus it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ such a known attachment means to attach one or more heating/cooling elements as shown in Horner to the outside of a conduit.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horner in view of Collito and Kissell as applied to claim 19 above, and further in view of Brown et al.

The pipe or tracer line 1 of Horner is shown as being round in cross section in the illustrative embodiment; Brown et al. show similar attachment arrangements for steam tracer lines in which the equivalency of rectangular and round pipes is expressly shown (see Figs. 3-5). Thus, it would have been an obvious substitution of known equivalents to employ a rectangular shaped pipe in the device of Horner as modified above.

Claims 4 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The remaining references of record show various means for exchanging heat between conduits mounted in parallel to each other.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Allen J. Flanigan/
Primary Examiner, Art Unit 3744